

NEW COMBINATIONS IN *POTENTILLA* AND *HORKELIA* (ROSACEAE) IN CALIFORNIA

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ABSTRACT

Three new combinations are proposed for use in the upcoming revised Jepson Manual of California plants. *Potentilla rimicola* (Munz & I.M. Johnston) Ertter replaces *P. wheeleri* subsp. *rimicola*, while *Horkelia californica* subsp. *dissita* (Crum) Ertter and subsp. *frondosa* (E.L. Greene) Ertter replace *H. elata* and *H. frondosa* respectively.

KEY WORDS: *Potentilla*, *Horkelia*, Rosaceae, California, taxonomy

As a result of preparing the treatment of herbaceous Rosaceae for the forthcoming *The Jepson Manual: Higher Plants of California*, several new combinations were found to be necessary. Key characters and descriptions will be found in the Manual and are therefore not included here.

Potentilla rimicola (Munz & I.M. Johnston) Ertter, *comb. et stat. nov.*

BASIONYM: *Potentilla wheeleri* S. Wats. var. *rimicola* Munz & I.M. Johnston, Bull. S. Calif. Acad. Sci. 24:18. 1925.

The *Potentilla wheeleri* complex (Rydberg's *Subviscosae*) includes a series of biogeographically interesting taxa on isolated mountain ranges in California, Arizona, New Mexico, and northern México. Typical *P. wheeleri* occurs from the southern Sierra Nevada to northern Baja California. Although the distinctiveness or circumscription of possible segregates var. *paupercula* Jepson (Mount San Gorgonio, San Bernardino County, California), *P. luteosericea* Rydb. (northern Baja California), or *P. viscidula* Rydb. (southern Arizona) are thus far uncertain, my initial studies of the complex indicate that at least var. *rimicola* is worth recognizing at the species level. A new combination is therefore needed at this time for the Jepson Manual.

The most distinctive difference between *Potentilla rimicola* and other members of the complex is that it grows in crevices of vertical rock faces; morphological differences include pedicel length and characters of the fruit. *Potentilla rimicola* occurs only in the San Jacinto Mountains of Riverside County, California, and the Sierra San Pedro Mártir of northern Baja California, México. Although *P. wheeleri* occurs in the same mountain ranges, no intergradation between the taxa has been found.

The petrophytic habit is very unusual in *Potentilla* s. str. but characterizes many species of *Ivesia* Torrey & A. Gray (Ertter 1989). These same species of *Ivesia* differ from members of the *P. wheeleri* complex in having pinnately rather than palmately divided leaves, but otherwise share several other intriguing biogeographical and morphological similarities, including glandular hairs, ridged seeds, and \pm recurved pedicels.

Horkelia californica Cham. & Schldl. subsp. *dissita* (Crum) Ertter, *comb. et stat. nov.* BASIONYM: *Potentilla elata* E.L. Greene var. *dissita* Crum in Jepson, *Fl. Calif.* 2:197. 1936.

Potentilla elata E.L. Greene, *Pittonia* 1:100. 1887. *Potentilla californica* (Cham. & Schldl.) E.L. Greene var. *elata* (E.L. Greene) E.L. Greene, *Fl. Franciscana* 1:66. 1891. *Horkelia elata* (E.L. Greene) Rydb., *Bull. Torrey Bot. Club* 25:54. 1898.

Horkelia glandulosa Eastw., *Bull. Torrey Bot. Club* 32:195. 1905.

Horkelia californica Cham. & Schldl. subsp. *frondosa* (E.L. Greene) Ertter, *comb. et stat. nov.* BASIONYM: *Potentilla frondosa* E.L. Greene, *Pittonia* 1:300. 1889. *Horkelia frondosa* (E.L. Greene) Rydb., *Bull. Torrey Bot. Club* 25:54. 1898. *Potentilla californica* (Cham. & Schldl.) E.L. Greene var. *frondosa* (E.L. Greene) Jepson, *Man. Fl. Pl. Calif.* 494. 1925.

Although most treatments during the last few decades treat *Horkelia* (or *Potentilla*) *californica*, *elata*, and *frondosa* as distinct species, this glosses over the large number of intermediate specimens that do not fall conveniently into one taxon or another. Numerous collections from the North Coast ranges of California are particularly frustrating in their intermediacy between typical *H. elata* and typical *H. californica* (e.g., size of leaflets and degree of lobing). Intermediates in leaf morphology also blur the distinctiveness of *H. frondosa*, supporting the treatment of all three as infraspecific taxa.

Unfortunately, the familiar epithet "elata" must be replaced, in that *Potentilla elata* E.L. Greene is a later homonym of *P. elata* Salisb. (*Prodr. Stirp. Chap. Allerton* 1796, p. 362). Britten (1916) argues convincingly that Salisbury's numerous names, although largely superfluous, should not be ignored.

Subspecies are used rather than varieties, both to parallel usage elsewhere in *Horkelia* and to avoid problems caused by the questionable identity of *Potentilla glandulosa* [β] *incisa* Lindl. The possible synonymy with subsp. *frondosa* of this name and the equally problematical *Horkelia grandis* Hook. & Arn. is discussed in detail by Keck (1938).

LITERATURE CITED

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